

REMARKS

Reconsideration and allowance of the subject application are respectfully requested. Claims 1-6 remain pending, claim 1, 3, and 5 being independent. Applicant appreciates the Examiner's indication that the drawings submitted February 14, 2003 have been received and accepted.

Prior Art Rejections

1. Kobori - Kado

Claims 1, 3, and 5 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Kobori et al.* (U.S. Patent 5,109,281) in view of *Kado et al.* (U.S. Patent 5,410,609). This rejection is respectfully traversed.

Independent claim 1 is directed to an image processing method for obtaining a layout image signal representing a layout image in which a plurality of "person images" are arranged. The image processing method of claim 1 obtains the layout image signal from a plurality of original image signals, each representing an image of a person in which a face pattern of the person is embedded. The image processing method of claim 1 (as amended February 14, 2003) comprises the steps of: i) detecting face information from each of the original image signals, the face information representing a position and/or a size of the face pattern of the person in the person image represented by each original image signal, ii)

performing a pattern matching process for each face pattern represented by the detected face information to calculate an amount of displacement and/or size difference thereof from a normalized value, iii) performing a face pattern normalizing process on each of the original image signals based on the detected face information and the calculated amount of displacement and/or size difference, a plurality of normalized image signals being obtained from the face pattern normalizing process, and iv) laying out a plurality of images, which are represented by the normalized image signals, in a predetermined layout, whereby the layout image signal representing the thus formed layout image is obtained.

According to a disclosed embodiment on which independent claim 1 reads, face information detected from an original image signal is compared to a reference image, with predetermined center coordinates, a dimension v in the vertical direction, and a dimension h in the horizontal direction. A face pattern, its center coordinates, its horizontal dimension h and its vertical dimension v are detected in an image represented by the original image signal and a pattern matching unit 8 determines the amount of displacement and/or resizing necessary to normalize the face pattern in the image. A normalizing unit 3 performs a transformation of the original image to obtain a normalized image signal $S1$ based on the output of the pattern matching unit 8. (See

p. 9, line 4 - p. 10, line 1 of the specification). Using pattern matching, the present invention is able to determine the amount of displacement and/or resizing necessary to obtain a desirable layout image without relying on a trial and error approach.

Kobori discloses a video printer arrangement in which a video camera (signal source 1) is positioned relative to an object so that the object is centered relative to the camera. After the object image is taken and stored in memory, a monitor 15 is used to check the position, brightness, and contrast of the object. If the result of this monitoring step is unsatisfactory, the imaging conditions, including positioning of the video camera, are readjusted until a satisfactory image is generated. Col. 4, lines 56-57. Accordingly, the video printer of Kobori relies on trial and error for object positioning in an image.

The new grounds of rejection acknowledges this deficiency of the primary reference, stating on page 4 of the Office Action that:

Kobori is silent to performing a pattern matching process, as claimed, to calculate an amount of displacement or size difference from a normalized value, and then using the displacement or difference for normalizing the face. Instead, Kobori relies on trial and error for normalizing the face. The position of the face is checked and repeatedly adjusted until it is satisfactory (figure 3).

Nonetheless, the Examiner rejects independent claim 1 by relying on the secondary reference, *Kado*, which the Examiner describes on page 4 of the Office Action as follows:

Rather than relying on trial and error, *Kado* employs pattern matching to directly calculate the correction amount to be used for normalization. In particular, *Kado* discloses comparing a pattern of a standard (normalized) face to the inputted face pattern in order to detect spatial differences between the two, such as the tilt of inputted face with respect to the standard face. Based on the detection of these differences, normalization procedures such as enlargement, rotation, and reduction are carried out on the inputted face so that the image of the face becomes normalized. Column 3, lines 35-51.

Having characterized the teachings of *Kado* as such, the Examiner concludes that it would have been obvious to modify *Kobori* to incorporate the pattern matching process of *Kado* for face pattern normalizing. Applicant submits, however, that this reasoning fails to establish *prima facie* obviousness of claim 1 at least for the following reasons.

Kado discloses an apparatus for identification of individuals, such identification being performed by comparing characteristic points of a face to be recognized with characteristic points of facial images stored in a database. To enhance subsequent comparison, the characteristics extracting unit 2 of *Kado* performs a series of normalization procedures such as rotation, enlargement, and reduction. Col. 3, ll. 41-45. Thus, the system of *Kado* performs

normalization of the face to be recognized prior to comparison with reference images stored in a database.

A significant distinction between this operation of Kado and the image processing method recited in claim 1 is that the invention of claim 1 performs automated face pattern normalizing of a plurality of face patterns so that the size thereof do not fluctuate when represented in a layout image of a plurality of images, whereas Kado performs normalization prior to a comparison with reference data to identify individuals. Contrary to the Examiner's characterization of the reference, Kado does not perform normalization using a pattern matching process, and instead performs normalization prior to a characteristic point matching process. The description of "the inputted visual image is A/D converted to a digital image, applied with a correction by rotating, enlarging, reducing, etc., ... and then by applying with two-valued processing, etc." (col. 3, ll. 25-34) suggests that the normalization process such as rotation, enlargement, and reduction is performed manually.

To establish *prima facie* obviousness, all claim limitations must be taught or suggested by the prior art and the asserted modification or combination of prior art must be supported by some teaching, suggestion, or motivation in the applied reference or in knowledge generally available to one skilled in the art. *In re*

Fine, 837, F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Thus, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). The prior art must suggest the desirability of the modification in order to establish a *prima facie* case of obviousness. *In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1995). It can also be said that the prior art must collectively suggest or point to the claimed invention to support a finding of obviousness. *In re Hedges*, 783 F.2d 1038, 1041, 228 USPQ 685, 687 (Fed. Cir. 1986); *In re Ehrreich*, 590 F.2d 902, 908-09, 200 USPQ 504, 510 (CCPA 1979).

Even if the pattern matching process of *Kado* were applied to *Kobori* (assuming these references may be combined, which Applicant does not admit), the results would not yield the method recited in claim 1, which requires performing a face pattern normalizing process based on the results of pattern matching. Furthermore, because the primary reference, *Kobori*, is directed to a video printer and not a system for identification, Applicant submits that there is no reason to incorporate the identification features of *Kado* in *Kobori*. In other words, there is no apparent motivation for the asserted combination.

In view of the above, Applicant respectfully submits that the asserted grounds of rejection fails to establish *prima facie* obviousness of independent claim 1. Furthermore, Applicant submits that the rejection fails to establish *prima facie* obviousness of claim 3 or 5 based on similar reasoning.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 103 based on the asserted combination of *Kobori* and *Kado*.

2. *Kobori - Kado - Tabata*

Claims 2, 4, and 6 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Kobori* and *Kado* in view of *Tabata et al.* (U.S. Patent 4,618,991). This rejection is respectfully traversed.

As set forth on page 5 of the Office Action, the Examiner relies on *Tabata* as allegedly teaching the incremental features of dependent claims 2, 4, and 6. Applicant submits, however, that the Examiner's reliance on *Tabata* fails to make up for the deficiencies of the applied *Kobori-Kado* combination discussed above in the context of the independent claims. Therefore, the asserted combination of *Kobori*, *Kado*, and *Tabata* (assuming these references may be combined, which Applicant does not admit) fails to establish *prima facie* obviousness of any pending claim.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 103 based on the asserted combination of *Kobori*, *Kado*, and *Tabata*.


Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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